



UNITED STATES PATENT AND TRADEMARK OFFICE

col

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,800	03/26/2004	Joy P. Prabhakaran	H0005591	2799
128	7590	06/20/2005	EXAMINER	
HONEYWELL INTERNATIONAL INC. 101 COLUMBIA ROAD P O BOX 2245 MORRISTOWN, NJ 07962-2245			ASSOUAD, PATRICK J	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/708,800

Applicant(s)

PRABHAKARAN ET AL.

Examiner

Patrick J. Assouad

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-12 is/are rejected.
- 7) ☒ Claim(s) 3-7 and 9-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/6/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7/6/04 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the non-patent literature cited therein does not indicate a proper publication date. Li, "AN-582 Resolution Enhancements of digital Potentiometers with Multiple Devices" shows at the bottom of page 1, "Rev. A 12/19/01." This document has been cited by the Examiner on the attached PTO-892 and includes this date of revision as the publication date. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Drawings

2. The drawings are objected to because there is a very light "DOT" label in Fig. 1 and this is not discussed in the instant Specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a

Art Unit: 2857

drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: the Table of the Appendix following para. 0055 appears to have a problem; note particularly the end of the Table. Appropriate correction is required.
4. Claims 3-7 and 9-13 are objected to because of the following informalities: the Drawings and the Specification show and discuss "controller block 130"; however, the claims refer to "control block." Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Alan Li, "AN-582 Resolution Enhancements of Digital Potentiometers with Multiple Devices", Rev A 12/19/01.

7. As per independent claims 1, 2 and 8 which are simply a "plurality of digital potentiometers connected in parallel," see at least the Introduction and Figures 1-4 of Li which clearly show resolution enhancement using various parallel digital potentiometers configurations.

8. As per the limitations of independent claims 2 and 8 which refer to the first resistance being not equal to the second resistance, see at least Fig. 5 of Li and its discussion just above indicating that R1 and R2 may be different.

Art Unit: 2857

9. Claims 1-6 and 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Gruszecki et al. (US 2004/0252750 A1) filed 6/12/03 and published 12/16/04. Note that Fig. 2 of Gruszecki et al. is reproduced below.

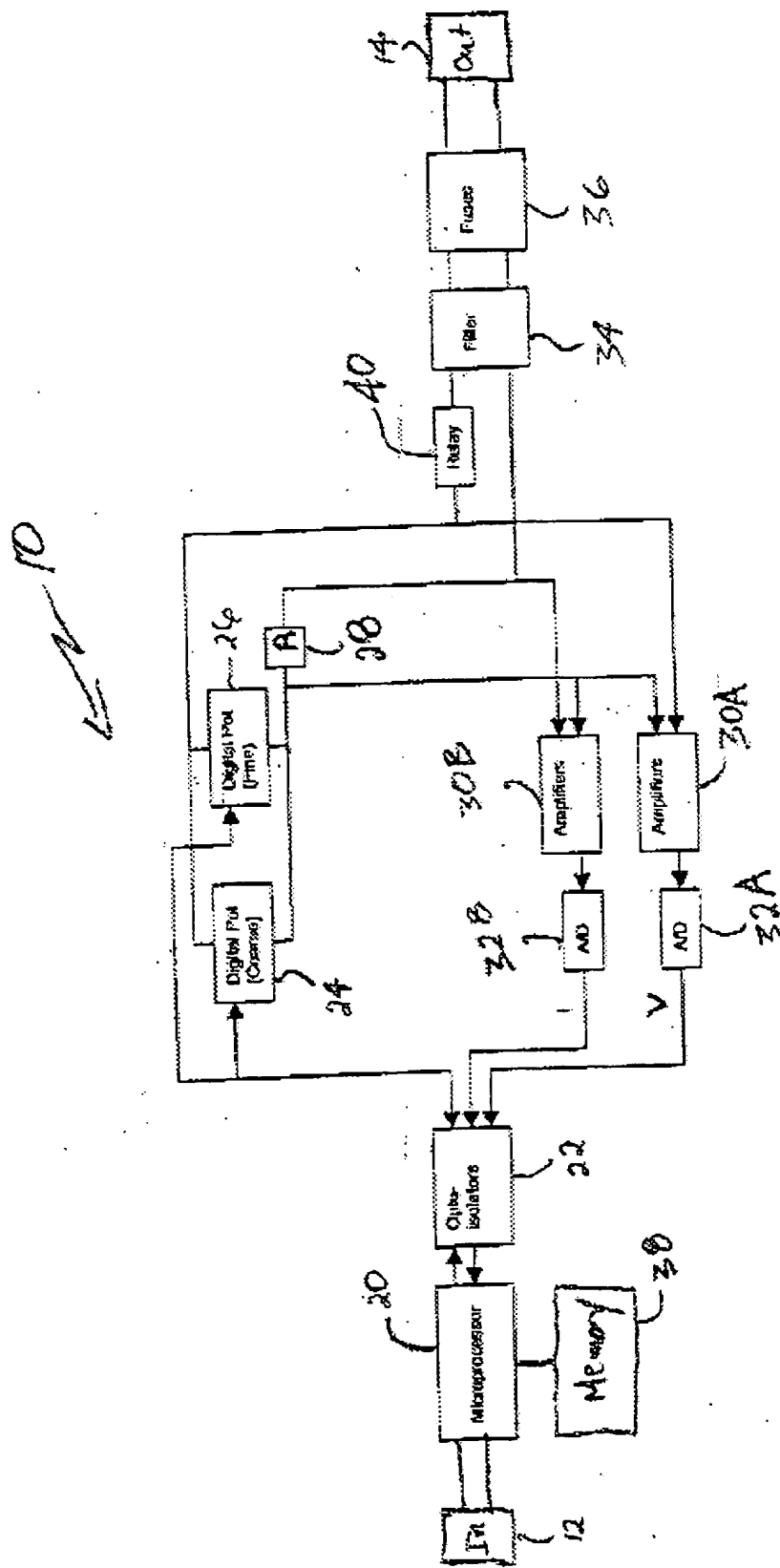


FIG. 2

Art Unit: 2857

10. As per independent claim 1 which is simply a "plurality of digital potentiometers connected in parallel," see at least Fig. 2 of Gruszecki et al. and also the following passages from Gruszecki et al.:

From para. 0006:

The variable resistance device may be comprised of a number of different devices. For example, the variable resistance device may comprise one or more potentiometers. In this regard, the variable resistance device may comprise one or more coarse digital potentiometers in parallel with one or more fine digital potentiometers. The coarse potentiometer may, for example, be controllable to provide a resistance level of between 100 (terminal resistance) and 10K ohms in 39 ohm increments and the fine potentiometer may, for example, be controllable to provide a resistance level of between 100 and 10K ohms in 9.8 ohm increments.

And from para. 0022:

Referring now to FIG. 2, there is shown a more-detailed block diagram of one embodiment of the temperature repeating system 10. In addition to the input and output connectors 12, 14, the temperature repeating system 10 includes a microprocessor 20, optical isolators 22, a coarse digital potentiometer 24 in a parallel arrangement with a fine digital potentiometer 26, a current sense resistor 28, a pair of amplifiers 30A and 30B, a pair of analog-to-digital (A/D) converters 32A and 32B, a filter 34, fuses 36, and a non-volatile memory device 38 and a relay 40. The microprocessor 20 receives the temperature data from the input connector 12 and provides the appropriate control signals through the optical isolators 22 to the coarse and fine digital potentiometers 24 and 26 in order to set the resistance seen at the output connector 14 to the appropriate value. In this regard, since the coarse and fine digital potentiometers 24 and 26 are in parallel, the resistance seen at the output connector 14 is given by the following expression for parallel resistance...

11. As per the limitations of independent claims 2 and 8 which refer to the first resistance being not equal to the second resistance, the fine and coarse potentiometers of Gruszecki et al. provide different fine and course resistance

Art Unit: 2857

values, and the total resistance is found in the expression at the end of para.

0022. Also see para. 0023 of Gruszecki et al.

12. As per dependent claims 3 and 9 which refers to a "control block" and in claim 9, a "processor," see at least para. 0005 of Gruszecki et al. which discusses the controller aspects which includes a microprocessor (see Fig. 2):

... The controller is operable to obtain the resistance level provided by a patient temperature sensor connected to the input connector. The controller is also operable to control the variable resistance device [the parallel digital pots] to establish the resistance level provided by the variable resistance device to the output connector in accordance with the resistance level obtained from the patient temperature sensor. In this regard, the variable resistance device and the controller may be operable to provide a resistance level to the output connector that equals the resistance level of the patient temperature sensor within an acceptable tolerance level (e.g., ± 4.5 ohms at 42.degree. C., ± 21 ohms at 10.degree. C.).

13. As per dependent claims 4-5 and 10-11 which refer to receiving a desired resistance value and then providing a substantially similar effective value, again see the above para. 0005 of Gruszecki et al., noting the given tolerance. Also see step 126 of Fig. 3B, step 212 of Fig. 4A, and Fig. 4B of Gruszecki et al.

14. As per dependent claims 6 and 12 which refer to a series resistor, see at least current sense resistor 28 or the resistance provided by filter 34 or other series resistances provided for in Fig. 2 of Gruszecki et al.

Allowable Subject Matter

15. The following is a statement of reasons for the indication of allowable subject matter: As per dependent claims 7 and 13, the prior art of record does not suggest or disclose the claimed combination of features, most notably that the first and second digital potentiometers and control block are implemented in a single integrated circuit.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Most notable is the non-patent literature cited on PTO-892 form.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2857

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick J Assouad
Primary Examiner
Art Unit 2857

pja